

The Residences at South Brookline Civil/Stormwater Peer Review

Brookline ZBA

April 10, 2014



Summary of Presentation

- ▶ Introduction – Role of Peer Review
- ▶ Peer Review Letter Findings
- ▶ Summary of Major Issues
- ▶ Next Steps
- ▶ Questions



Site Development

- ▶ Engineering – Risk vs Reward
 - Not \$ possible to design for all “what ifs?”
 - Design for most probable situations/events
 - Standards – agree upon minimum standards
- ▶ Challenges & Relief
 - Most good/easy sites developed
 - Stricter Regulations & Protections
 - Special 40B Rules

Site Engineer – Review Engineer

- ▶ Developer's Engineer – **How can I build this?**
 - ❖ Maximize Developer's Goals – Now
 - Economically, within the Site Constraints, Environmentally Friendly & Safely
 - Spent far more Time with Site and Design
- ▶ Review Engineer – **Impacts to Town/Abutters?**
 - ❖ Protect Town & Abutters – Long Range
 - Avoid, Minimize & Mitigate Impacts
 - Safe, Environmentally Sensitive
 - Brief Snapshot (cannot check every calculation)
 - May seek Town or Abutter input to Identify Issues

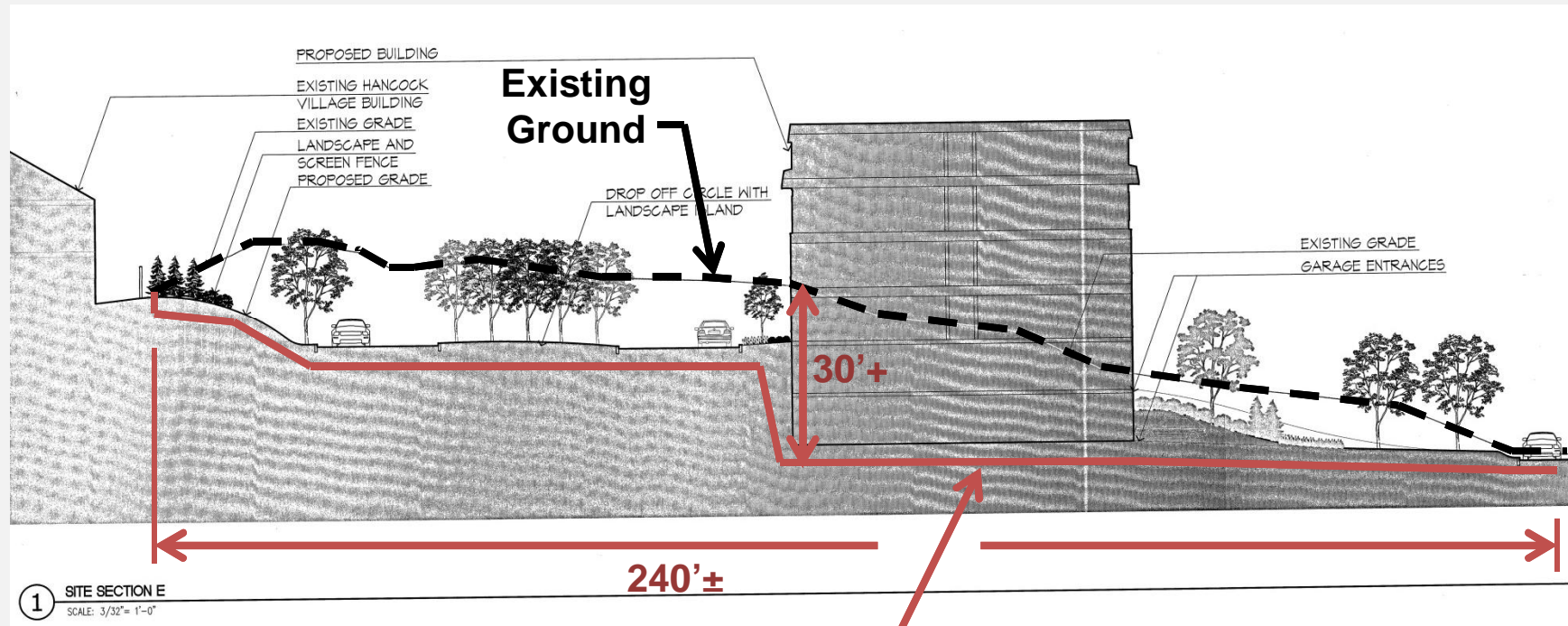
Peer Review Letter Findings

- ▶ Site Prep & Earthwork
 - ▶ Site Plan
 - ▶ Site Access, Parking and Loading
 - ▶ Utility Services
 - ▶ Landscape & Lighting
 - ▶ Environmental & Cultural Impacts
 - ▶ Stormwater Management
- ▶ Note: Review letter provides details of all areas reviewed under this assignment – issues not included in letter were not reviewed

Site Prep & Earthwork

- ▶ Excavation for Building 13 Construction
 - Blasting/Hammering of Puddingstone
 - Up to 30 feet deep & >20,000 cu. yds
 - Proximity to Exist. Buildings, Access Drives & Parking
 - Removal from Site
 - Size and Number of trucks
 - Truck Route
 - Impacts on Existing Roads

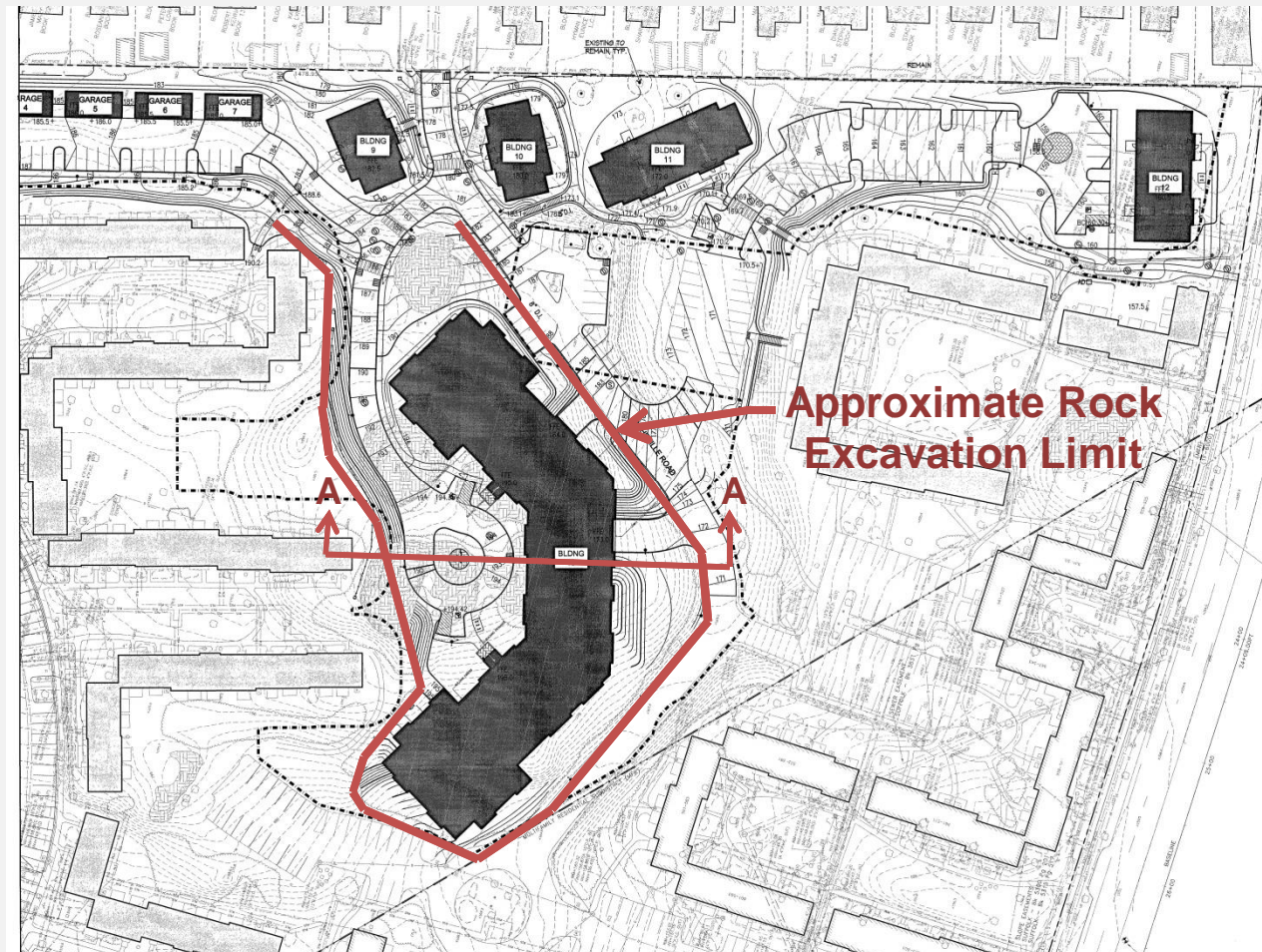
Site Prep & Earthwork



Approximate Rock
Excavation Limit

Section A - A

Site Prep & Earthwork

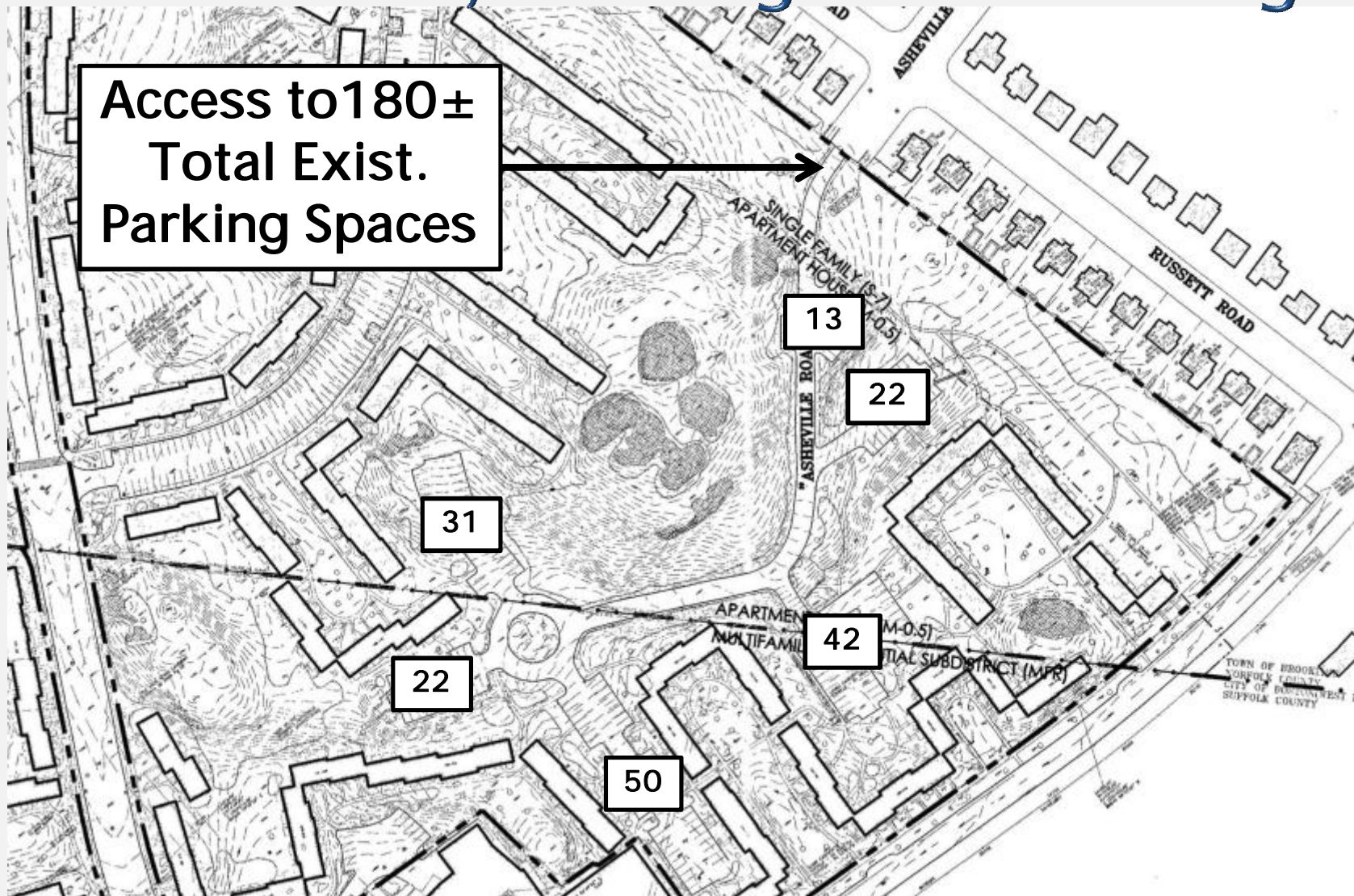


Site Plan

- ▶ Existing Exercise Stations Relocated?
- ▶ Trash & Recycling Accommodations
 - Locations & Schedule for removal

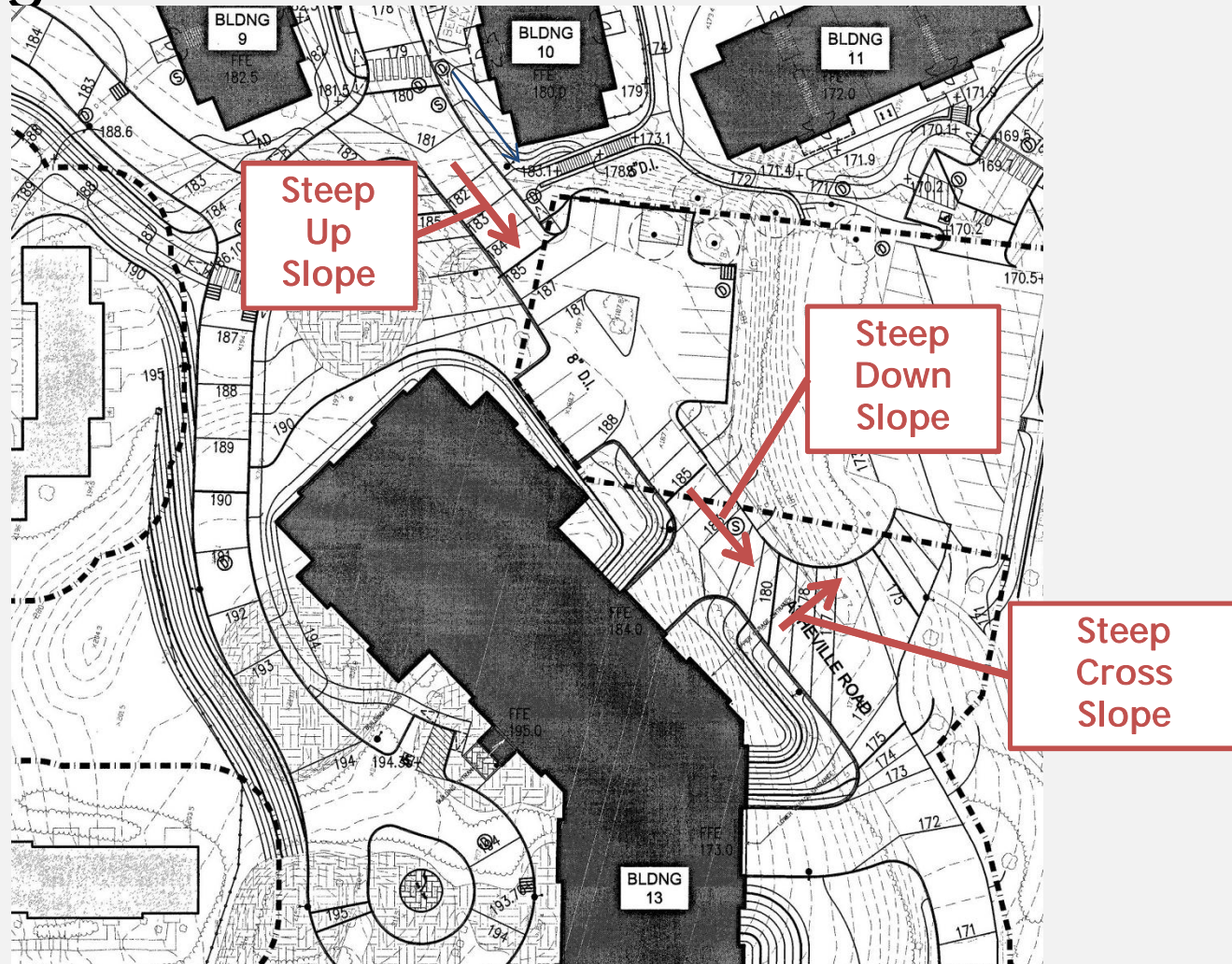


Site Access, Parking and Loading



Site Access, Parking and Loading

► Grading of Asheville Road

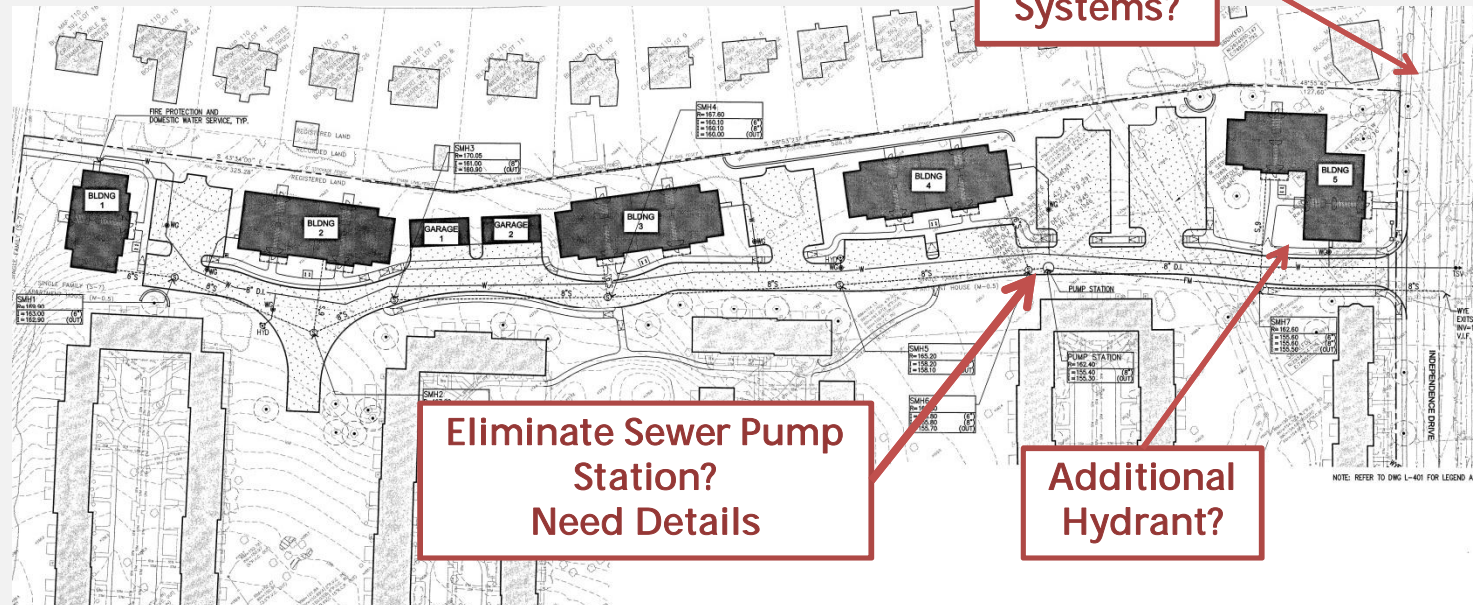


Site Access, Parking and Loading

- ▶ Parking / Pedestrian Route
- ▶ Existing Visitor Parking

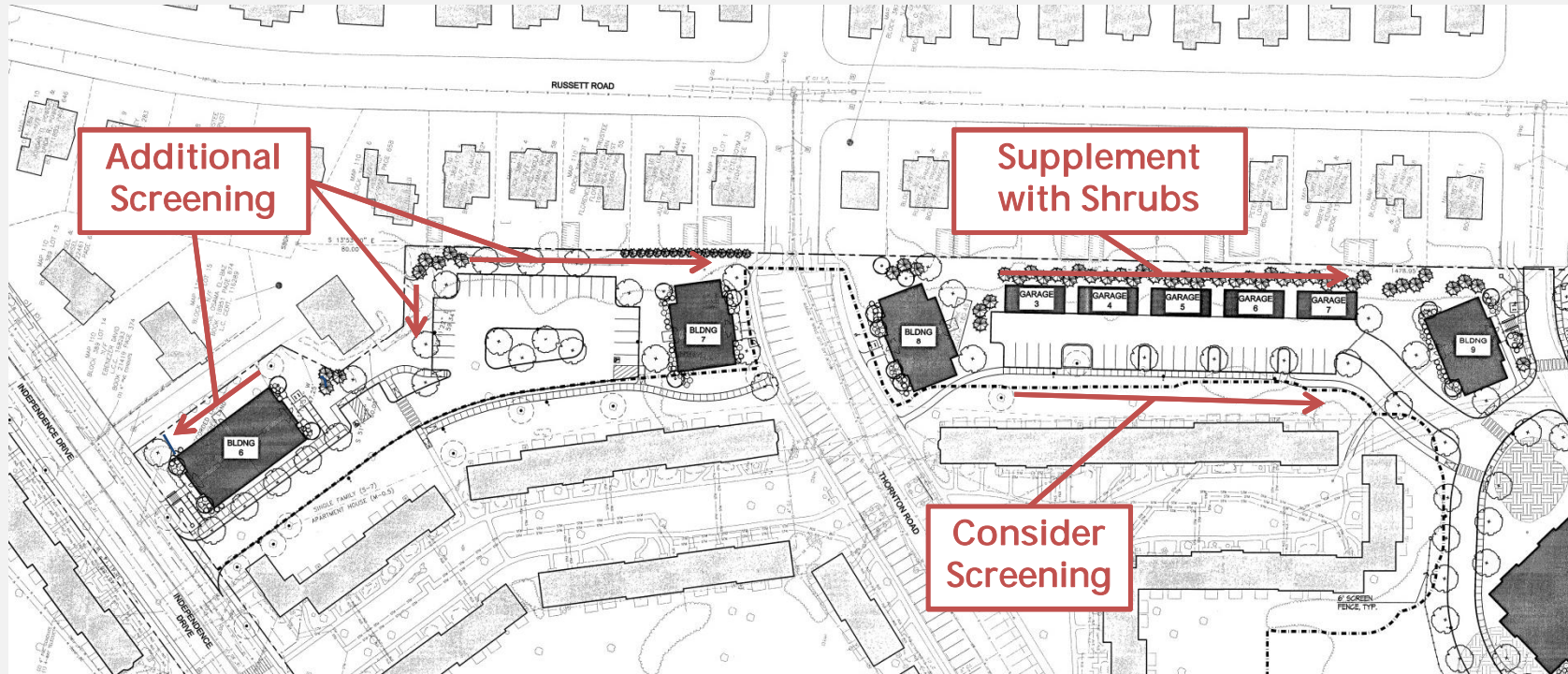


Utility Services

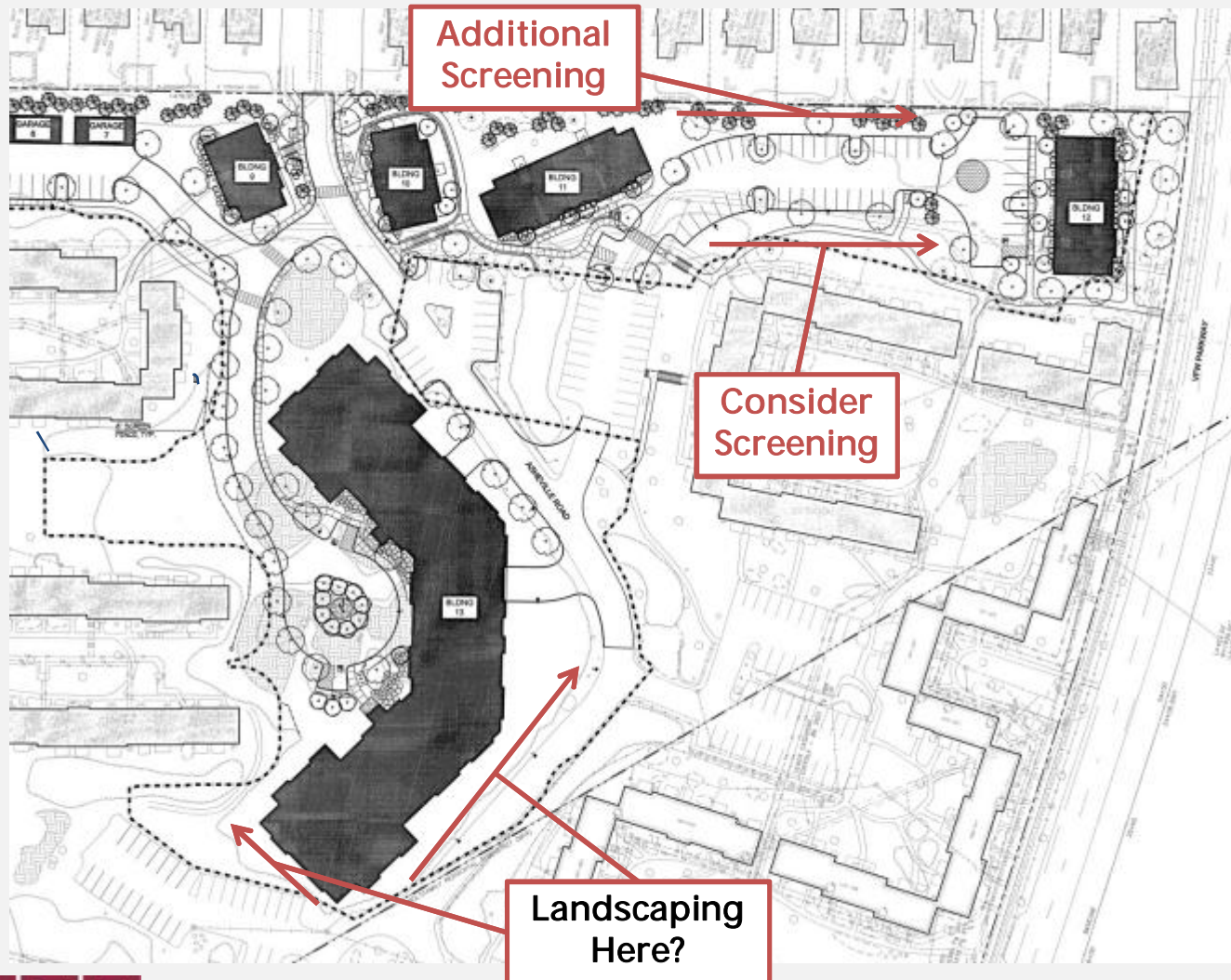


Details of Other Utilities
(Structures)

Landscaping

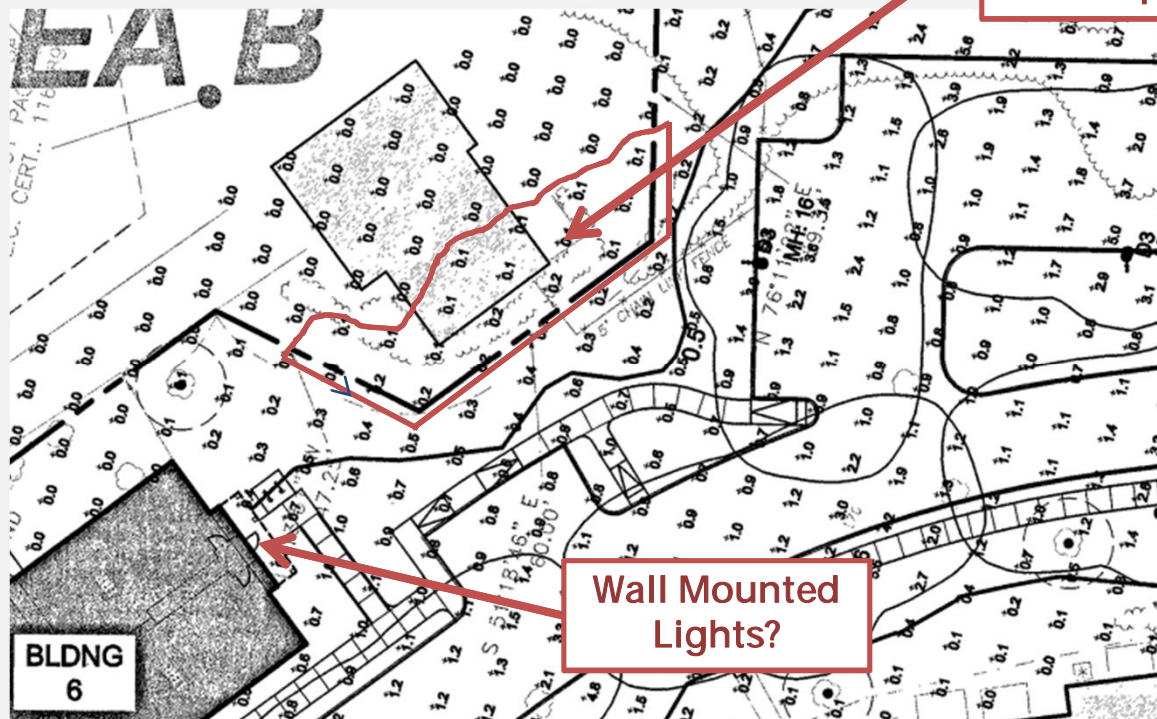


Landscaping



Landscape & Lighting

- Lighting
 - Add to Building 10 Walkway



Environmental & Cultural Impacts

- ▶ Project Outside Mapped Resource Areas
 - Wetlands –Investigating Vernal Pool
 - Flood Zones
 - Endangered Species Habitat

- ▶ Historical Sites
 - Baker School
 - 205 Beverly Road

- ▶ Mosquitoes?

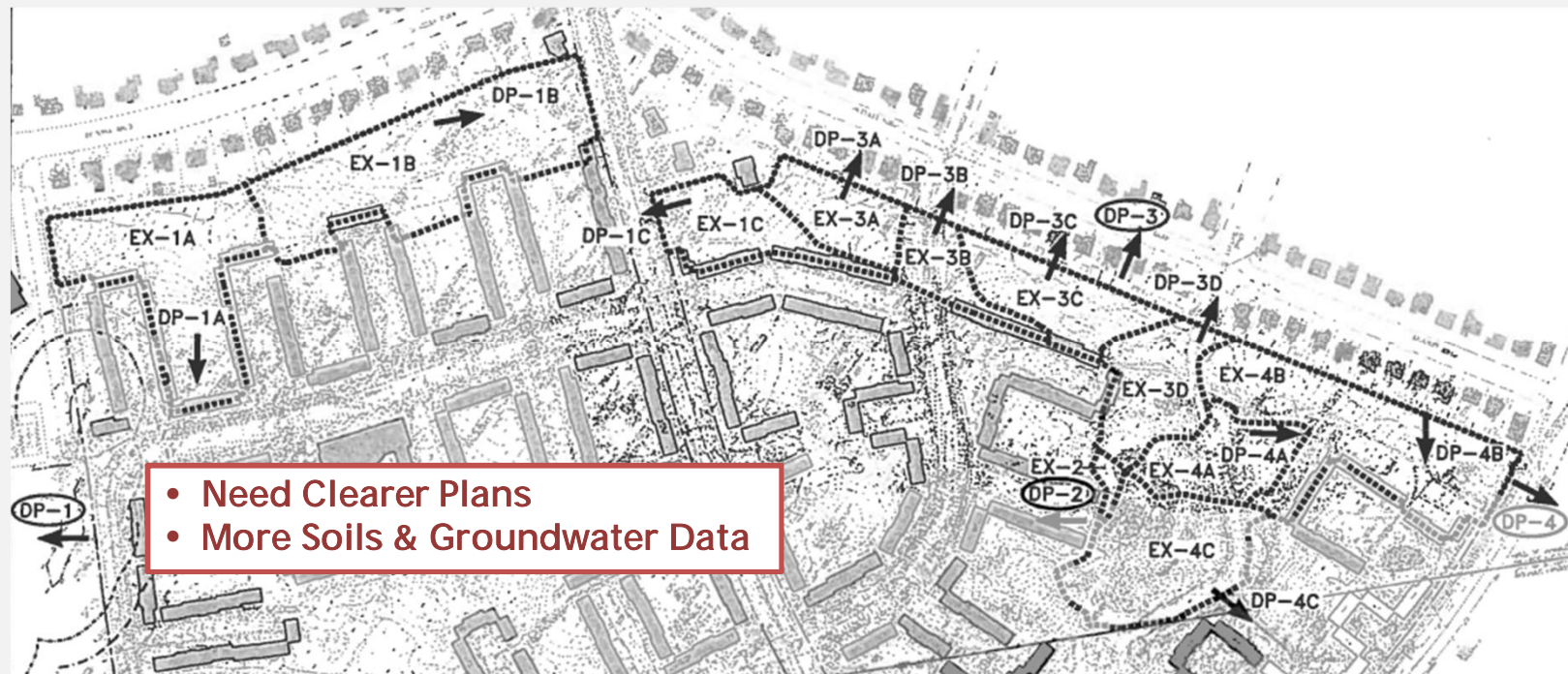
Stormwater Management

- ▶ Do No Harm – Document Impacts to:
 - Town Systems
 - Abutter's Properties
 - Sensitive Environmental Receptors
- ▶ Existing Conditions Basis
- ▶ Proposed Design
- ▶ Stormwater Management Standards
- ▶ Porous Pavement
- ▶ Construction Erosion & Sedimentation Plan
- ▶ Long Term Maintenance of System

◦

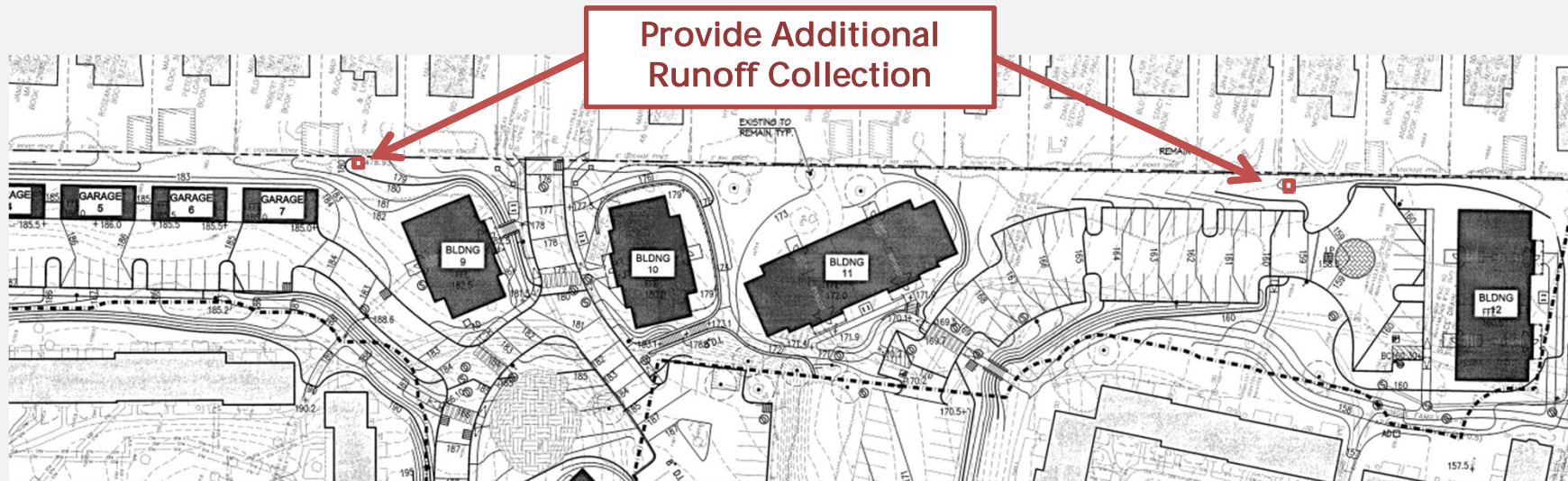
Existing Conditions – Basis

- ▶ Confirm Watershed Areas & Surface Condition
- ▶ Soils and Ledge & Groundwater
- ▶ Known Flooding – Town & abutter's info



Proposed Design

- ▶ Grading Site to Drain
- ▶ Collection & Conveyance
- ▶ Treatment & Mitigation
- ▶ Construction & Maintenance



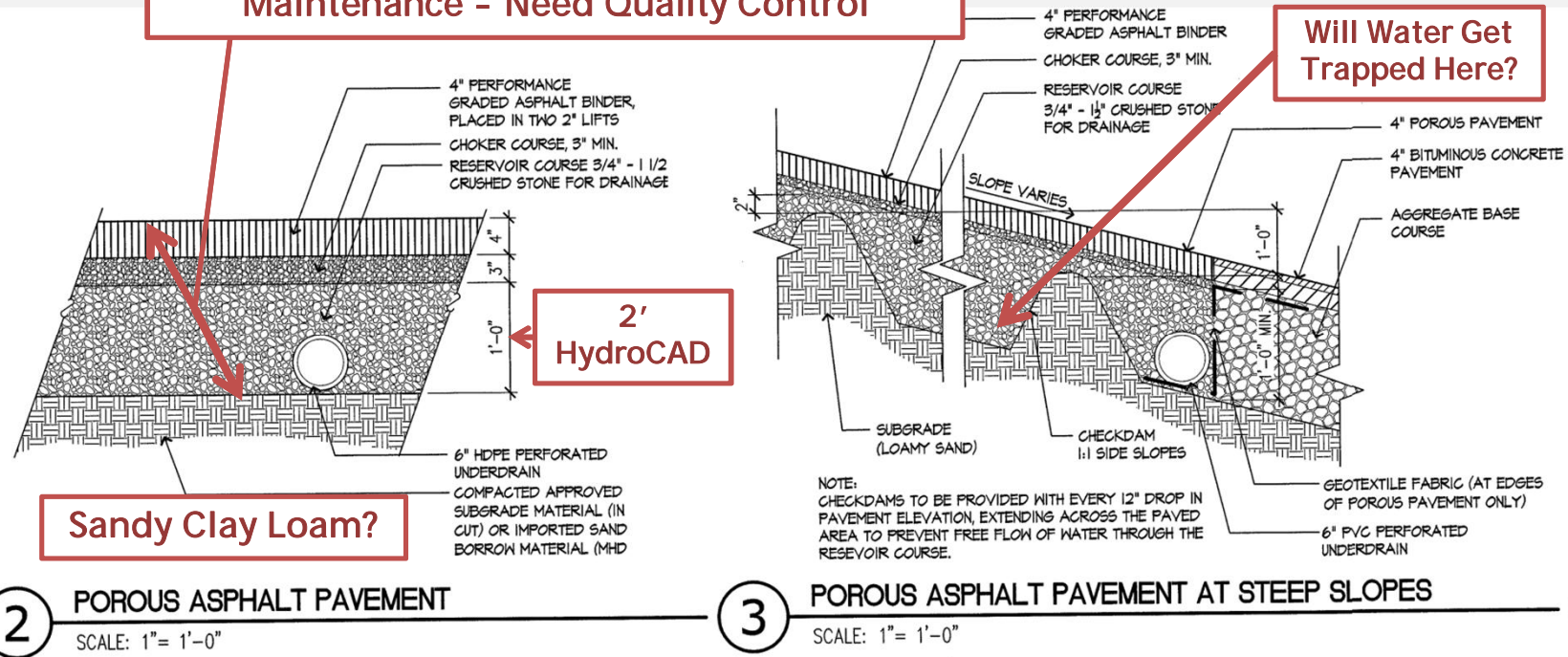
Stormwater Standards

1. No New Untreated Outfalls to Wetlands
2. No Increase in Peak Runoff
3. Groundwater Recharge
4. Pollutant (TSS) Removal
8. Erosion & Sedimentation Plan
9. Long Term Maintenance
10. No Illicit discharges

*Note standards 5, 6 & 7 are not applicable to this project

Porous Pavement (LID)

Special Materials, Construction, Protection & Maintenance - Need Quality Control



Risk - If Failure Consider:

- Water Quantity and Quality to Town & Wetland Systems
- Impact on Abutters
- Future Repair & Replacement Issues

Summary of Major Issues

- ▶ Earthwork Operations
- ▶ Emergency Access
- ▶ Stormwater & Porous Pavement



Next Steps

- ▶ Work with Site Engineer to address:
 - Peer Review Findings – April 2nd Letter
 - ZBA Questions – Raised Tonight
 - Town Departments – Comment Letters
 - Abutter Concerns – Survey & Letters
- ▶ Provide Updated Review Letter
- ▶ Present Status Report at Future ZBA Meeting

QUESTIONS?

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